CLAIMS:

1. A thin profile battery bonding method comprising:

providing a curable adhesive composition comprising an epoxy terminated silane;

providing a thin profile battery and a substrate to which the thin profile battery is to be conductively connected;

interposing the curable adhesive composition between the thin profile battery and the substrate; and

curing the adhesive into an electrically conductive bond electrically interconnecting the battery and the substrate.

2. The method of claim 1 wherein the epoxy terminated silane comprises a glycidoxy methoxy silane.

3. The method of claim 1 wherein the epoxy terminated silane comprises a glycidoxyproplytrimethoxysilane.

4. The method of claim 1 wherein the epoxy terminated silane is present in the curable adhesive composition at less than or equal to about 2% by weight.

5. The method of claim 1 wherein the epoxy terminated silane is present in the curable adhesive composition at less than or equal to about 1% by weight.

6. The method of claim 1 wherein the thin profile battery comprises an outer nickel clad stainless steel surface over which the curable adhesive composition is received.

7. The method of claim 1 wherein the thin profile battery is a button type battery having a terminal housing member comprising an outer nickel clad stainless steel surface over which the curable adhesive composition is received.

8. The method of claim 1 wherein the thin profile battery is a button type battery having a terminal housing member comprising an outer nickel clad stainless steel surface over which the curable adhesive composition is received, and the substrate comprises conductive printed thick film ink over which the curable adhesive composition is received.

9. A method of conductively interconnecting electronic components:

providing a curable adhesive composition comprising an epoxy terminated silane;

providing first and second electronic components to be conductively connected with one another;

interposing the curable adhesive composition between the first and second electronic components; and

curing the adhesive into an electrically conductive bond electrically interconnecting the first and second components.

10. The method of claim 9 wherein at least one of the components comprises a nickel containing metal surface over which the curable adhesive composition is received.

11. The method of claim 9 wherein the epoxy terminated silane comprises a glycidoxy methoxy silane.

12. The method of claim 9 wherein the epoxy terminated silane comprises a glycidoxyproplytrimethoxysilane.

13. The method of claim 9 wherein the epoxy terminated silane is present in the curable adhesive composition at less than or equal to about 2% by weight.

14. The method of claim 9 wherein the epoxy terminated silane is present in the curable adhesive composition at less than or equal to about 1% by weight.

15. A thin profile battery bonding method comprising:

interposing a curable epoxy composition between a thin profile battery and a substrate to which the thin profile battery is to be conductively connected, at least one of the battery and substrate comprising a metal surface with which the curable epoxy is to electrically connect; and

curing the epoxy into an electrically conductive bond electrically interconnecting the battery and the substrate, the epoxy having an effective metal surface wetting concentration of silane to form a cured electrical interconnection having a contact resistance through said metal surface of less than or equal to about 0.3 ohm-cm^2.

16. The method of claim 15 wherein the epoxy has an effective metal surface wetting concentration of silane to form a cured electrical interconnection having a resistance through said metal surface of less than or equal to about 0.16 ohm-cm^2.

17. The method of claim 15 wherein the epoxy has an effective metal surface wetting concentration of silane to form a cured electrical interconnection having a resistance through said metal surface of less than or equal to about 0.032 ohm-cm^2.

18. The method of claim 15 wherein the metal surface wetting concentration of silane in the curable adhesive composition is less than or equal to about 2% by weight.

19. The method of claim 15 wherein the metal surface wetting concentration of silane in the curable adhesive composition is less than or equal to about 1% by weight.

20. The method of claim 15 wherein the thin profile battery has the metal surface and which comprises nickel clad stainless steel over which the curable adhesive composition is received.

21. The method of claim 15 wherein the thin profile battery has the metal surface and is a button type battery having a terminal housing member comprising nickel clad stainless steel over which the curable adhesive composition is received.

22. The method of claim 15 wherein the epoxy terminated silane comprises a glycidoxy methoxy silane.

23. A method of conductively interconnecting electronic components comprising:

interposing a curable epoxy composition between first and second electrically conductive components to be electrically interconnected, at least one of the components comprising a metal surface with which the curable epoxy is to electrically connect; and

curing the epoxy into an electrically conductive bond electrically interconnecting the first and second components, the epoxy having an effective metal surface wetting concentration of silane to form a cured electrical interconnection having a contact resistance through said metal surface of less than or equal to about 0.3 ohm-cm^2.

24. The method of claim 23 wherein the epoxy has an effective metal surface wetting concentration of silane to form a cured electrical interconnection having a resistance through said metal surface of less than or equal to about 0.16 ohm-cm^2.

25. The method of claim 23 wherein the epoxy has an effective metal surface wetting concentration of silane to form a cured electrical interconnection having a resistance through said metal surface of less than or equal to about 0.032 ohm-cm^2.

26. The method of claim 23 wherein the metal surface wetting concentration of silane in the curable adhesive composition is less than or equal to about 2% by weight.

27. The method of claim 23 wherein the metal surface wetting concentration of silane in the curable adhesive composition is less than or equal to about 1% by weight.

28. The method of claim 23 wherein the metal surface comprises nickel over which the curable adhesive composition is received.

29. A battery powerable apparatus comprising:

a substrate having a surface comprising at least one node location;

a thin profile battery mounted over the substrate and node location; and

a conductive adhesive mass electrically interconnecting the thin profile battery with the node location, the conductive adhesive mass comprising an epoxy terminated silane.

30. The apparatus of claim 29 wherein the epoxy terminated silane comprises a glycidoxy methoxy silane.

31. The apparatus of claim 29 wherein the epoxy terminated silane comprises a glycidoxyproplytrimethoxysilane.

32. The apparatus of claim 29 wherein the epoxy terminated silane is present in the adhesive mass at less than or equal to about 2% by weight.

33. The apparatus of claim 29 wherein the epoxy terminated silane is present in the adhesive mass at less than or equal to about 1% by weight.

34. The apparatus of claim 29 wherein the thin profile battery comprises an outer nickel clad stainless steel surface over which the conductive adhesive mass is received.

35. The apparatus of claim 29 wherein the thin profile battery is a button type battery having a terminal housing member comprising an outer nickel clad stainless steel surface over which the conductive adhesive mass is received.

36. The apparatus of claim 29 wherein the thin profile battery is a button type battery having a terminal housing member comprising an outer nickel clad stainless steel surface over which the conductive adhesive mass is received, and the substrate comprises conductive printed thick film ink over which the conductive adhesive mass is received.

37. A radio frequency communication device comprising:

a substrate having conductive paths including an antenna;

at least one integrated circuit chip mounted to the substrate and in electrical connection with a first portion of the substrate conductive paths; and

a thin profile battery conductively bonded with a second portion of the substrate conductive paths by a conductive adhesive mass, the conductive adhesive mass comprising an epoxy terminated silane.

38. The device of claim 37 wherein the epoxy terminated silane comprises a glycidoxy methoxy silane.

39. The device of claim 37 wherein the epoxy terminated silane comprises a glycidoxyproplytrimethoxysilane.

40. The device of claim 37 wherein the epoxy terminated silane is present in the adhesive mass at less than or equal to about 2% by weight.

41. The device of claim 37 wherein the epoxy terminated silane is present in the adhesive mass at less than or equal to about 1% by weight.

42. The device of claim 37 wherein the thin profile battery comprises an outer nickel clad stainless steel surface over which the conductive adhesive mass is received.

43. The device of claim 37 wherein the thin profile battery is a button type battery having a terminal housing member comprising an outer nickel clad stainless steel surface over which the conductive adhesive mass is received.

44. The device of claim 37 wherein the thin profile battery is a button type battery having a terminal housing member comprising an outer nickel clad stainless steel surface over which the conductive adhesive mass is received, and the conductive paths comprise conductive printed thick film ink over the second portion of which the conductive adhesive mass is received.

45. An electric circuit comprising first and second electric components electrically connected with one another through a conductive adhesive mass comprising an epoxy terminated silane.

46. The electric circuity of claim 45 wherein the epoxy terminated silane comprises a glycidoxy methoxy silane.

47. The apparatus of claim 45 wherein the epoxy terminated silane comprises a glycidoxyproplytrimethoxysilane.

48. The apparatus of claim 45 wherein the epoxy terminated silane is present in the adhesive mass at less than or equal to about 2% by weight.

49. The apparatus of claim 45 wherein the epoxy terminated silane is present in the adhesive mass at less than or equal to about 1% by weight.

50. The apparatus of claim 45 wherein at least one of the first and second electric components comprises a nickel containing metal surface over which the conductive adhesive mass is received.